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BULLETIN

OF

Syracuse University

Graduate School

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1923-1924

Published by the University

BULLETIN OF SYRACUSE UNIVERSITY

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CALENDAR

FOR ALL DEPARTMENTS OF THE UNIVERSITY

(Vacation periods are inclusive of the dates given)

1924

April	17-23,	Thursday-Wednesday-Easter vacation.						
June	6,	Friday-Annual meeting of Trustees, 9 a.m.						
	7,	Saturday-Annual meeting of the Alumni Associa						
		tion, 11 a. m.						
	8,	Sunday-Baccalaureate sermon, Gymnasium, 10.30						
		a. m.						
	9,	Monday—Commencement, 10 a.m.						
June 30 - Aug. 8,		Monday-Friday-Summer Session.						
	Sept. 12,	Monday-Friday-Summer Session, second term.						
Sept.	4-18,	Thursday-Thursday-Summer Surveying Camp.						
Sept.	15-17,	Monday-Wednesday-Entrance examinations.						
Sept.	16, 17,	Tuesday, Wednesday-Registration for freshmen.						
		(Freshman registration closes 5 p.m. September						
		17th. Late registrants pay a fine of \$5.00).						
Sept.	17-30,	Wednesday-Tuesday-Registration for Extension						
		courses.						
Sept.	18,	Thursday—Classes for freshmen begin.						
Sept.	18-20,	Thursday-Saturday-Registration of sophomores,						
		juniors and seniors.						
Sept.	18-20,	Thursday-Saturday-All classes meet for prelim-						
		inary arrangements.						
Sept.	18-20,	Thursday-Saturday-Supplementary examinations.						
Sept.	20,	Saturday—General Assembly, 11 a.m.						
Sept.	22,	Monday—First semester begins in all colleges.						
Oct.	1,	Wednesday—Extension courses begin.						
Nov.	11,	Tuesday-Meeting of Trustees, 9 a.m.						
Nov.	26-29,	Wednesday-Saturday-Thanksgiving vacation.						
Dec. 20	- Jan. 3,	Saturday-Saturday-Christmas vacation.						
19	25							
Jan. 26	Feb. 7,	Monday-Saturday-Registration for second sem-						
		ester Extension courses.						
Jan.	31,	Saturday—First semester ends.						
Feb.	2-4,	Monday-Wednesday-Senior week, entrance ex-						
		aminations, registration for second semester.						
Feb.	5,	Thursday—Second semester begins.						
Feb.	9,	Monday—Second semester Extension courses be-						
		gin.						
Feb.	12,	Thursday—Day of Prayer for Colleges.						
April	9-15,	Thursday-Wednesday-Easter vacation.						
June	15,	Monday—Commencement, 10 a.m.						

GRADUATE EXECUTIVE COMMITTEE

1923-1924

CHARLES WESLEY FLINT, A.M., D.D., LL.D. Chancellor

WILLIAM PRATT GRAHAM, Ph.D. Vice-Chancellor

WILLIAM L. BRAY, Ph.D.

Dean of the Graduate School; Acting Dean of the College of Liberal Arts; Professor of Botany.

PERLEY OAKLAND PLACE, A.M., LITT.D.

Associate Dean of the Graduate School; Professor of Latin.

HAROLD LOOMIS CLEASBY, Ph.D.

Professor of Classical Archaeology and Italian

HORACE AINSWORTH EATON, Ph.D.

Jesse Truesdall Peck Professor of English Literature

THOMAS CRAMER HOPKINS, Ph.D. Professor of Geology

ALBERT S. HURST, Ph.D.

Dean of Teachers College; Professor of Education

MARK ARTHUR MAY, Ph.D. Professor of Psychology

FREDERICK FRANKLIN MOON, B.A., M.F.

Dean of the New York State College of Forestry

ISMAR JOHN PERITZ, Ph.D.
Willard Ives Professor of Biblical Languages

CHARLES LEE RAPER, Ph.D., LL.D.

Dean of the College of Business Administration; Franklin Professor of Transportation

WILLIAM MARTIN SMALLWOOD, Ph.D. Professor of Zoölogy

EARL EVELYN SPERRY, Ph.D.

Professor of European History and Civic Education

HERMAN G. WEISKOTTEN, Ph.B., M.D.

Acting Dean of the Medical College; Professor of Pathology

REGULATIONS FOR GRADUATE WORK

Regulations governing graduate work, the courses of instruction, and the requirements for higher degrees, were revised in 1902, and placed under a standing committee of the Faculty of the College of Liberal Arts known as the Committee on Graduate Work and responsible to that Faculty.

In 1911-1912 the Graduate School was organized with an independent faculty consisting of a Dean and the professors and instructors giving courses approved for graduate credit. This faculty is the legislative body of the Graduate School, which is under the direction of the Dean and a Graduate Executive Committee appointed annually by the Chancellor.

ADMISSION

Graduates of colleges and universities of recognized standing, are admitted as graduate students in the departments of study for which their previous work has qualified them. Admission to study in the Graduate School does not necessarily imply admission to candidacy for a degree. (See "Candidacy", pages 5, 6, and 8).

All applications for admission must be approved by the Executive Committee, and applicants from other institutions than Syracuse University must file with the Dean an official transcript of the undergraduate record.

Seniors in the colleges and schools of the University who have completed at mid-year all requirements for the bachelor's degree, and those who have completed 117 of the 120 hours required for graduation may, on the recommendation of their Dean and Major professor, be admitted to the Graduate School. These students, however, pay the undergraduate tuition charges. (See "Graduate Credit in the Last Semester of the Senior Year", page 6.)

REGISTRATION

Graduate students register in the office of the Graduate Dean (210 Lyman Hall) at the opening of each semester or summer session. A preliminary registration card with the provisional program of study must receive the approval of the Major and the Minor professor. On the final registration card are entered the approved courses which the student intends to pursue. This card will be signed by the Dean, by the Major professor, and by those who give the courses.

RESIDENCE

A graduate student is considered in residence if he attends classes at least three days each week of the session. In the case of teachers and others engaged in professional work within the greater Syracuse area, this requirement may be fulfilled by an equivalent number of hours, even if they fall within the limits of a single day.

For an advanced degree a minimum residence of one year is required. The schedule of work, not including the thesis, is a minimum of twenty-two semester hours (eleven hours each semester). For the required residence, four summer sessions—or one semester and two summer sessions—are regarded as the equivalent of one year.

The minimum of residence for the Master's degree is one year, for the Doctor's degree three years, but a longer period is usually required of Instructors, Graduate Assistants, and Fellows who are at the same time teachers or assistants; the additional period, in the case of the Master's degree, is often one session of the Summer School.

CANDIDACY

A graduate student becomes a candidate for an advanced degree only with the approval of the Graduate Executive Committee, after he has submitted a program of study endorsed by the Major professor and the Dean.

ADVISORY COMMITTEE

A candidate's program of study for an advanced degree is under the supervision of an advisory committee comprising the Major professor and others under whom major or minor courses are taken. This committee may prescribe additional work to meet deficiencies in the candidate's preparation, and will report to the Dean the progress of the candidate.

CHARACTER OF GRADUATE WORK

- 1. Training in Methods of Research. The work of the graduate student differs materially from that of the undergraduate. Courses for graduate study are of an advanced character. Graduate study also includes training in methods of research, and emphasis is placed on ability to work out successfully a specific problem in the chosen field.
- 2. Required Standing. The student is required to maintain an average standing of not less than 85 per cent, and in no course may the standing of the student fall below 80 per cent (i.e. the student must maintain an average grade of B or higher).

If the standing in any course taken toward an advanced degree is below 80 per cent, the candidate is ineligible to receive the degree the same year.

- 3. Major and Minor Courses. The courses in the Major and Minor subjects, if not intended primarily for graduates, must at least be courses to which only advanced undergraduates (e.g. senior majors) are admitted. In courses not primarily for graduates, additional work is required for graduate credit.
- 4. Graduate Credit in the Last Semester of the Senior Year. Courses taken during the senior year in excess of all undergraduate requirements may, under certain conditions, be counted toward an advanced degree: Graduate credit may be allowed only upon petition, in advance and endorsed by the Major professor and the Dean of the Graduate School; and then only for courses of graduate standing taken during the semester preceding the registration in the Graduate School. These seniors pay the undergraduate tuition charges.

THE MASTER'S DEGREES

A. MASTER OF ARTS-A.M.; MASTER OF SCIENCE-M.S.

- 1. Candidacy. A student may be accepted as a candidate for the degree of Master of Arts or Master of Science, who has received the corresponding bachelor's degree from Syracuse University or from some other institution of recognized standing. (See "Admission", page 4.)
- 2. Residence Requirement. The candidate for the Master's degree shall complete satisfactorily a course of advanced, non-professional study, pursued in residence for a period of not less than one year. This requirement may be met by attendance at four sessions of the Summer School. (See "Residence", page 5.)

In certain cases, upon the recommendation of the Major professor, a graduate of Syracuse University may substitute one-half year of residence at another institution. The final oral examination, however, will include all the work credited toward the degree. (See "Examinations", 5, below.)

- 3. Conferring of Degrees. Degrees are conferred in January and in June. At least one semester prior to the date upon which a student expects to obtain his degree, he must make formal application for candidacy to the Dean. (See "Candidacy", page 5.)
- 4. Program of Study. The prospective candidate must elect not less than sixteen semester hours in some one department, known as his Major department, and at least six semester hours in another department, known as his Minor department. With the approval of the major professor four of the sixteen semester hours in the major department may be taken in an allied department.

Also, the candidate, except in the department of Mathematics, must submit a thesis in the Major department as evidence of ability to prosecute independent research. The thesis is given a minimum credit value of three hours each semester (six semester hours). (See "Presentation of Thesis", 6, below.) With the permission of the Executive Committee the thesis may be written in absentia.

The candidate's program of study must be approved by the Major professor, by the Dean, and by the Executive Committee. (See "Advisory Committee, page 5.)

5. Examinations. The candidate must pass a written examination upon such portions of his work as are not covered by the thesis. He must also pass an oral examination on the thesis and the Major and Minor subjects before an Examining Committee of those under whom he has studied, with the addition of one or more members of the Faculty appointed by the Dean.

The oral examination may not take place later than two weeks before Commencement Day. It must all be taken at one time, and must be preceded by the approval of the candidate's thesis by the Examining Committee.

6. Presentation of Thesis. The candidate's thesis, approved by the Major professor, must be received by the Dean not later than January 1st or May 1st of the semester in which the candidate presents himself for his degree. A bound, typewritten copy of the thesis must be placed in the University Library.*

With the permission of the Executive Committee the thesis may be written in absentia.

- B. Master of Music—Mus.M.; Master of Architecture—Ar.M.; Master of Painting—M.P. (See page 34, "College of Fine Arts".)
- C. MASTER OF SCIENCE IN ENGINEERING. (See page 35, "Lyman Cornelius Smith College of Applied Science".)
- D. Master of Forestry—M.F.; Master of City Forestry—M.C.F.; Master of Science (in Forestry)—M.S. (See page 37, "The New York State College of Forestry".)
- E. MASTER OF SCIENCE IN BUSINESS—M.S. in Business. (See page 42, "College of Business Administration".)

The requirements for the degree in Group E are the same as those described in group A,

^{*}Information as to the form of the thesis may be obtained at the Dean's office.

THE DOCTOR'S DEGREE

Doctor of Philosophy-Ph.D.

r. Candidacy. A student may be accepted as a candidate for the degree of Doctor of Philosophy who has received the degree of Bachelor of Arts, Bachelor of Science, or Bachelor of Philosophy, or its equivalent, from Syracuse University or from some other institution of recognized standing. Also, all candidates shall have a reading knowledge of two modern languages besides English. Students in Romance languages and English are advised to continue the study of Latin.

Not later than December 15th of the final year the student shall make a formal application for candidacy, stating the subject of his thesis. No candidate may present himself for final examination until this application has been approved by the Executive Committee.

2. Residence Requirement. A candidate for the degree of Doctor of Philosophy shall spend at least three academic years in residence. Not more than two years of residence in another approved institution may be offered; but the credit given for such work is given for time of residence only, and does not exempt the student from any part of the examination on his subjects. The last year of study must be at Syracuse University. No work in absentia, except that connected with the preparation of the thesis, will be accepted.

If the candidate has already received his Master's degree at Syracuse University, the residence and study accepted for that degree may be counted in partial fulfillment of the requirement for the degree of Doctor of Philosophy, provided such residence and study be approved by the Faculty.

The degree of Doctor of Philosophy is given only in recognition of high attainments in the candidate's chosen field, as shown by the completion of specified courses and by the production of a thesis showing power of independent investigation. The thesis shall form an actual contribution to existing knowledge. (See "Advisory Committee", page 5.)

It is to be explicitly understood that the conferring of this degree is not based merely upon the number of courses completed, nor after a given period of residence. The quality of the work is all-important.

3. Program of Study. The candidate must elect a Major subject including not less than thirty-six semester hours, * and a First and a Second Minor subject, each including not less than twelve semester hours.

^{*} The candidate's advisory committee will prescribe a program covering a minimum period of three years. Due consideration will be given to the time devoted to the thesis. In some cases the thesis may deserve more than the usual number of credit hours, and the requirement in the Major subject be proportionately lessened.

The First Minor may be chosen from the same group as the Major subject, but not from the same department. The Second Minor subject may be chosen in any department approved by the Major Professor and the Dean. See "The Master's Degree", 4 (final paragraph).

The thesis, which must be related to the Major subject, must show unquestionably the power of independent research.

4. Examinations. The prospective candidate must pass a preliminary examination, oral, written, or both, in the Major and Minor subjects not earlier than than one year prior to the date for receiving the degree, nor later than the middle of the final year of the course. Until this preliminary examination has been passed, he may not be enrolled as a candidate for the degree. If this examination is unsatisfactory, the applicant may, by permission of the Executive Committee, be granted a second examination, but only after a period of one semester.

The candidate must pass a final written examination upon such portions of his work as are not covered by his thesis. He must also pass an oral examination on his thesis and his Major and Minor subjects before an Examining Committee of those under whom he has studied, one or more members of the Faculty appointed by the Dean, and any other members of the Faculty who may wish to be present.

The final oral examination may not take place later than two weeks before Commencement day. It must all be taken at one time, and only after the candidate's thesis has been approved by the Examining Committee.

5. Presentation of Thesis. The candidate's thesis, approved by the head of the Major department, must be handed to the Dean not later than January 1st or May 1st of the academic year in which the candidate presents himself for his degree.

The thesis, since it must form an actual contribution to existing knowledge, and must be founded on the original investigations by the candidate, will be deemed an index of his scholarly attainments, and will largely determine the final success of his candidacy.

The Executive Committee has the right to challenge any thesis.

In case the thesis is accepted, the candidate must print it and place fifty copies in the library of the University.*

NOTE—Candidates for the degree of Doctor of Philosophy in the New York State College of Forestry at Syracuse University are referred to Circular No. 42 of that college.

^{*} In some cases the publication of a suitable digest of the thesis will suffice. One hundred copies must be placed in the library of the University.

FELLOWSHIPS

For the promotion of graduate study and research, Syracuse University has established ten Fellowships of the value of \$500 each. They are open for competition to graduates of Syracuse University, or of any other college of recognized standing, who have shown superior efficiency in the department in which they wish to study.

Candidates from other institutions must submit certified records of their college standings, and all should provide statements and credentials from men under whom they have worked.

The holder of a fellowship is expected to work for the Master's or Doctor's degree and to give a certain amount of assistance to the department in which he holds the fellowship.

Graduate "Fellows" are exempt from the tuition charges.

Candidates for fellowships should send their applications to the Dean of the Graduate School not later than March 15. The awards are made early in April for the year following.

GRADUATE SCHOLARSHIPS

Sixteen Graduate Scholarships of \$140 each, amounting to the tuition in the Graduate School, will be awarded graduates of colleges and universities of recognized standing. In awarding eight of the scholarships preference will be given to applicants who are not graduates of Syracuse University. The purpose of the scholarships is to assist students whose undergraduate record and personal qualities give promise of superior success either in research or in the profession of teaching.

Applicants should file, not later than March 15, complete transcripts of their undergraduate work; special emphasis will be given to the record in the major and minor departments. Also, two letters in regard to character and personal qualities should be filed. The awards are made early in April for the year following.

The holders of Graduate Scholarships are designated as "University Scholars."

The major and minor work of a University Scholar must be in the subject, or subjects, in which his research or teaching belongs. Neither the major nor the minor may be in Education.

NOTE—University Scholars are expected to give their full time to study and research, but will be permitted to assist in the major department by service requiring, on an average, not more than 10 hours a week, and may be required to render service amounting to 6 hours a week. The service is intended to give valuable experience to the University Scholars.

F e e s 11

LIBRARIES

The various libraries of the University comprise over 144,000 volumes.

The General Library contains 120,000 volumes and over 60,000 pamphlets. The periodical room is supplied with the chief periodicals, American and foreign.

The most valuable special collection in the General Library is the historical library of Leopold von Ranke, given to the University by Dr. and Mrs. John M. Reid. It includes many rare books and documents and is of great value for research work.

The several departmental libraries are the Belden Library of Economics, the Peck alcove and the libraries of the departments of Classical Studies, History, German, English, Sociology, Biology, Chemistry, and Mathematics.

The library of the College of Medicine contains 12,074 bound volumes and a large number of pamphlets and unbound periodicals.

The library of The New York State College of Forestry is the best of its kind in the state.

The Colleges of Law, Applied Science, and Agriculture each have special libraries conveniently situated for their work.

The students of the University have the privilege of using the Syracuse Public Library, and the library of the Court of Appeals of the State of New York, one of the best law libraries in the country.

FEES

Matriculation .							•	\$ 5.00
Tuition, a semester	(14	hours,	inclu	ding	the the	esis)		70.00
Tuition, per credit	hour							5.00
Diploma						•	•	10.00

NOTE—Students taking courses for graduate credit in the last semester of the senior year pay the undergraduate tuition charges. Graduate students pay the usual laboratory fees.

The undergraduate fees in the New York State College of Forestry apply to Forestry students in the Graduate School.

All fees are payable twice a year, on or before the first day of each semester. The Treasurer's receipt admits to classes.

RE-REGISTRATION FEE

If a student shall be suspended from the University for any reason, he will be required to pay a re-registration fee of \$5.00 before being re-instated.

REFUND OF TUITION

The payments made by students for both tuition and fees do not meet the cost of maintenance and instruction, a large portion of which must be met from other resources. Refunds made by the University, therefore, will in no case be for the full amount, or even for an amount proportionate to the period enrolled and the period for which tuition and fees were collected. The registration of each student involves a considerable minimum expense to the University and contracts are made and obligations assumed on the basis of the total registration.

No refund will be made of any portion of the matriculation fee or of the general fee.

A student suspended or dismissed from the University, or withdrawing when under investigation for misconduct, is not entitled to any refund of tuition.

Refunds of tuition only will be made to students withdrawing from the University, except as noted in the preceding paragraph, according to the following schedule:

- On or before September 27th, or February 10th, a refund of four-fifths of amount paid for tuition only.
- On or before October 12th, or February 22nd, a refund of threefourths of amount paid for tuition only.
- On or before November 12th, or March 22nd, a refund of one-half of amount paid for tuition only.
- On or before December 12th, or April 30th, a refund of one-fourth of amount paid for tuition only.

A student leaving college on the recommendation of the Infirmary doctors, on account of illness, will be entitled to a full pro rata refund on tuition only.

DORMITORIES

For circular of information and diagrams of dormitories, address the Treasurer of the University.

For Men: Board and room in Sims Hall varies from \$390 to \$400 a year, including heat and light according to location of rooms.

For Women: Winchell Hall has rooms with or without bath; Haven Hall, especially for the Fine Arts students, has single rooms or suites with practice pianos; Reid Hall accommodates 34; Colonial Hall, 40; Vernon Cottage accommodates 20; Parker, McChesney, Schultze, Wilbor, Annable, Clarke, and Babcock Cottages have rooms for about 15 each. Prices for board and room vary from \$330 to \$475 a year.

APPOINTMENT OFFICE

The Appointment Office in the Administration Building assists graduates and undergraduates in finding positions. Students desiring employment should confer with the Director, Mrs. Minnie W. Partridge.

The placing of teachers is in charge of Dean Hurst of Teachers College.

REGULATIONS

The Trustees of Syracuse University reserve the right to amend or add to the regulations of the University, including those relating to fees and method of payment.

The University reserves the right to cancel any course for which the registration is too small.

Attendance at the University is a privilege and not a right. In order to safeguard those ideals of scholarship and that moral atmosphere which are in the very purpose of its founding and maintenance, the University reserves the right and the student concedes to the University the right to require the withdrawal of any student at any time for any reason deemed sufficient to it, and no reason for requiring such withdrawal need be given.

The University has general oversight of all rooming houses approved for students, and may at any time prohibit students from rooming in unapproved houses.

Smoking is prohibited in the buildings and on the steps or approaches to the buildings. Students are expected to refrain from smoking on the campus.

GENERAL REQUIREMENTS FOR GRADUATION

Requirements for graduation will include moral qualifications as well as educational, and completion of the formal requirements in courses, hours, grades, honor points, etc., does not necessarily entitle a candidate to a degree from Syracuse University. The Faculty will base their necessary recommendation on considerations of character and of ability, attainments, growth and worthiness in general, as well as upon the completion of the required number of hours and subjects in the course.

COURSES OF INSTRUCTION

NOTE—Courses numbered 1 to 99 are strictly undergraduate, from 100 to 199 for both advanced undergraduates and graduates, from 200 to 299 primarily for graduates.

The numeral following the title of the course indicates the number of credit hours a semester. All courses extend through the year, unless followed by a Roman numeral which indicates the semester. Courses in brackets [] not given 1924-25.

BACTERIOLOGY

OFFICE: ROOM 17, LYMAN HALL

Henry Neely Jones, A.B. (Colby)

Professor of Bacteriology

HARRY ASHER CHEPLIN, B.S. (Syracuse), Ph.D. (Yale)
Assistant Professor of Bacteriology

Chemistry 1 and either Botany or Zoölogy are prerequisite for the introductory course in General Bacteriology. Bacteriology is a prerequisite to all other courses offered in the Department. Students undertaking graduate work in Bacteriology should have work in Organic and Analytical Chemistry and advanced courses in Botany or Zoölogy, in accordance with their fields of special interest.

FOR UNDERGRADUATES AND GRADUATES

- 104. ADVANCED BACTERIOLOGY. 3. Messrs. Jones and Cheplin.
- 107. Dairy Bacteriology. 3.—I. Mr. Cheplin.
- 108. BACTERIAL AND PARASITIC DISEASES OF POULTRY. 3. Mr. Jones.
- 109. Soil Bacteriology. 3.—I. Mr. Cheplin.

FOR GRADUATES

210. RESEARCH. Messrs. Jones and Cheplin.

BIBLICAL LANGUAGES AND LITERATURE

OFFICE: ROOM 302, HALL OF LANGUAGES

ISMAR JOHN PERITZ, A.M., PH.D. (Harvard)
Willard Ives Professor of Biblical Languages

WILLIAM R. P. DAVEY, A.B., A.M. (Brown), S.T.B., Ph.D. (Harvard) Professor of Greek

JAMES W. STERLING, A.B. (Syracuse), Graduate Assistant

Prerequisites: Courses 4, 9, and 5, or their equivalent; if taken by graduates, partial credit will be allowed only on condition that the course is pursued on a broader scope than by undergraduates.

Requirements: For the Master's degree, a reading knowledge of one of the Biblical languages, Hebrew or Greek: course 101, 202, (or 103), 207, 208 with thesis.

A reading knowledge of German is required,

LINGUISTIC COURSES

- 101. Hebrew. 3. Elementary Course. Including the grammatical principles, the reading of easy Hebrew prose, and translation of English into Hebrew. Mr. Sterling.
 - 202. HEBREW. 3. ADVANCED COURSE. Mr. Peritz.
 - 103. Greek Testament and Septuagint. 2. Mr. Davey.

Courses in Aramaic, Assyrian, and Arabic will be given as they may be required by students prepared for them. Mr. Peritz.

BIBLICAL COURSES—(English Bible)

(These courses do not require a knowledge of the original languages.)

PRIMARILY FOR UNDERGRADUATES

- 4. BIBLICAL HISTORY, OLD TESTAMENT, 3. Mr. Peritz.
- 9. BIBLICAL HISTORY. NEW TESTAMENT, 3. Mr. Peritz.
- 5. THE BIBLE AS ENGLISH LITERATURE, 2. Mr. Peritz.

PRIMARILY FOR GRADUATES

- 207. The Teachings of the Bible. 3. Mr. Peritz.
- 208. Seminar. Research, reports, and thesis. Mr. Peritz.

BOTANY

OFFICE: ROOM 210, LYMAN HALL

WILLIAM L. BRAY, A.B., A.M. (Lake Forest and Indiana), Ph.D. (Chicago)

Professor of Botany; Dean of the Graduate School; Dean of the College of Liberal Arts

HENRY F. A. MEIER, A.B., A.M. (Indiana), Ph.D. (Columbia)

Professor of Botany

LOREN C. PETRY.* A.B. (Earlham), A.M. (Haverford), Ph.D. (Chicago)

Associate Professor of Botany

^{*} ON LEAVE OF ABSENCE 1923-24.

ERNEST REED, A.B., M.S., Ph.D. (Michigan)

Assistant Professor of Botany

PAUL J. SEDGWICK, A.B., Ph.D. (Chicago)
Instructor in Botany

CLIFTON E. HALSTEAD, A.B., A.M. (Syracuse)
Instructor in Botany

Prerequisites for graduate work: Undergraduate training should have included as a minimum advanced courses covering the basic aspects of botanical science; e.g. morphology, anatomy, taxonomy and physiology. Candidates should be well grounded in Chemistry and should be able to read German and French.

FOR UNDERGRADUATES AND GRADUATES

- 112. Plant Anatomy. 3.—II. Mr. Sedgwick.
- 113. PLANT PHYSIOLOGY. 3. Mr. Meier and Mr. Halstead.
- 114. BOTANICAL MICROTECHNIQUE. 3.—I. Mr. Sedgwick.
- 118. Seminar, & History of Botany. Journal reviews. Mr. Meier.
- 130. Mycology, I. Plant Pathology, II. Mr. Reed.

PRIMARILY FOR GRADUATES

- 217. RESEARCH. 3 or 6. Special problems in ecology, physiology, morphology and mycology or plant pathology. Messrs. Bray, Meier, and Reed.
- 219. ADVANCED ECOLOGY. 3. Supervised Summer field work is possible in this course. Mr. Bray.
 - 226. Advanced Physiology. 3. Mr. Meier.

CHEMISTRY

OFFICE: ROOM 108, BOWNE HALL

ERNEST NOBLE PATTEE, B.S., M.S. (Rochester), Sc.D. (Syracuse)

Professor of Chemistry

REGINALD STEPHEN BOEHNER, B.S. (Dalhousie), M.A., Ph.D. (McGill) Professor of Organic Chemistry

Ross Allen Baker, A.B., A.M. (DePauw), Ph.D. (Wisconsin)

Professor of Inorganic Chemistry

HARRY ESSEX, A.B. (Cornell), Ph.D. (Goettingen)

Professor of Physical Chemistry

CARL RAYMOND McCroskey, A.B. (Ohio Wesleyan), A.M., Ph.D. (Ohio State)

Associate Professor of Analytical Chemistry

LEON ABEL CONGDON, B.S. (Syracuse), M.S. (Colgate)

Associate Professor of Analytical Chemistry

Prerequisites for graduate work:

As a prerequisite for admission to graduate work in Chemistry all students must have a thorough preparation in General Inorganic Chemistry and Qualitative Analysis. In addition graduate students who are to make Chemistry their major subject must have preparation in Quantitative Analysis, Organic Chemistry and Physical Chemistry. They should also have a good knowledge of Physics and of Mathematics including Calculus. A reading knowledge of French and German is highly desirable and is necessary for candidates for the Doctor's degree.

The following courses may be taken for graduate minor credit only:

- 104. QUANTITATIVE ANALYSIS. 3. Part 1. Gravimetric, first semester. Part 2. Volumetric, second semester. Mr. Congdon.
 - 105. Organic Chemistry. 3. Mr. Boehner.
- 110(a). Physical Chemistry. 3. Mr. Essex. Prerequisites: Chemistry 204, Analytic geometry, Differential calculus.
- 110(b). Physical Chemistry. 3. An elementary course in fundamental principles. Higher mathematics not required. Mr. Essex.

The following courses may be offered for graduate major credit:

- 102. ADVANCED INORGANIC CHEMISTRY. 3. Mr. Baker.
- 108, INORGANIC PREPARATIONS, 2. Mr. McCroskey.
- 109. ORGANIC PREPARATIONS. 3. Mr. Boehner.
- 111. HISTORY OF CHEMISTRY, 2. Mr. Pattee.
- 112. Physical Chemistry. 3. A laboratory course, requiring about 8 hours laboratory work weekly. Mr. Essex. Prerequisite: Course 110(a).
 - 115. ADVANCED QUANTITATIVE ANALYSIS. 3. Mr. Congdon.
- 116. Advanced Quantitative Analysis. 3. A continuation of course 115. Mr. Congdon.
- 118. Advanced Organic Chemistry. 3. A course of lectures and recitations on organic chemistry. Mr. Boehner.
 - 120. Water Analysis. 2.—II. Mr. Pattee.
 - 135. Advanced Qualitative Analysis. 3. Mr. McCroskey.
 - 136. AVANCED CHEMISTRY OF FOODS. 3. Mr. Congdon.
- 222. Advanced Physio-Chemical Measurements. 3.—I or II. Mr. Essex.
 - 223. ADVANCED PHYSICAL CHEMISTRY. 3. Mr. Essex.
 - 228. Organic Chemistry, 3. Mr. Boehner.

ECONOMICS

OFFICE: ROOM 105, SLOCUM HALL

THOMAS W. B. CRAFER, A.B. (North Dakota), A.M. (Harvard) LL.B. (Boston), A.M. (Harvard), Ph.D. (Wisconsin)

Professor of Economics

James Howard Hanger, A.B., A.M. (Kansas)
Associate Professor of Economics

CHARLES R. SMALL, A.B., A.M. (Harvard)

Assistant Professor of Economics

LAWRENCE PASEL, A.B., LL.B. (Illinois Wesleyan), A.M. (Columbia)

Assistant Professor of Economics

Economics 1 (Principles of Economics) is a prerequisite for all other courses in Economics, and may not be counted for either major or minor work.

UNDERGRADUATE AND GRADUATE COURSES

- 104. DISTRIBUTION. 3.—I. Mr. Small.
- 103. Public Finance and Taxation. 3.—I. Mr. Hanger.
- 115. Tariff—Its Economic Bearings. 3.—II. Mr. Hanger.
- [116.] Economic Cycles. 3.—II. Mr. Small.
- 107. LABOR PROBLEMS. 3.—I. Mr. Crafer.
- [117.] Monopolies and Trusts. 3.—II. Mr. Crafer.
- 123. Consumption of Wealth. 3—I. Mr. Pasel.
- 109. Statistics. 3—I. Mr. Hanger.
- 122. SEMINAR IN ECONOMICS. 2. Messrs. Crafer, Hanger, Small, and Pasel.

PRIMARILY GRADUATE COURSES

- 206. PROPERTY AND CONTRACT. 3.—II. Mr. Crafer.
- 213. History of Economic Thought. 3.—I. Mr. Crafer.
- 220. The Classical Economists, 3.—II. Mr. Crafer.
- 221. Modern English and American Economists. 3.—I. Mr. Small.

ENGLISH

OFFICE: ROOM 214, HALL OF LANGUAGES

Horace Ainsworth Eaton, A.B., A.M., Ph.D. (Harvard)

Jesse Truesdall Peck Professor of English Literature

JEAN MARIE RICHARDS, A.B. (Smith), A.M., LITT.D. (Syracuse)
Professor of English; Dean of Women

- CHARLES HENRY CARTER, A.B. (Haverford), A.M., Ph.D. (Harvard)

 Professor of English
- Ross Jewell, A.B. (Syracuse, A.M. (Yale), Ph.D. (Pennsylvania) Professor of English; Registrar
- Hunley Whatley Herrington, A.B. (Washington University), A.M., Ph.D. (Harvard)

 Professor of English
- Eugene F. Bradford, A.B. (Bowdoin), A.M. (Harvard)

 Associate Professor of English
- Joseph Sheldon Gerry Bolton, A.B., A.M. (Yale)
 Assistant Professor of English
- WILLIAM YERRINGTON, A.B. (Creighton), A.M. (Syracuse)
 Instructor in English

Students should have completed the equivalent of an undergraduate major in English before entering upon graduate work.

All candidates for the degree of A.M. are required to take English 204 and 205.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

- 106. CHAUCER. 3. Mr. Carter.
- 109. ELIZABETHAN NON-DRAMATIC LITERATURE. 3.—II. Mr. Herrington.
- 110. ELIZABETHAN DRAMA. 3. Includes most of the plays of Shake-speare. Mr. Herrington.
 - [111.] SAMUEL JOHNSON AND HIS CIRCLE. 3.—I. Mr. Bolton.
- 112. Romantic Poets of the Early Nineteenth Century. 3. Mr. Eaton,
- 113. Earlier Victorian Literature Including Tennyson. 3.—I. First semester, Mr. Herrington.
- 114. LATER VICTORIAN LITERATURE INCLUDING BROWNING. 3.—II. Mr. Yerington.
- 116. American Literature. 3. From its beginnings to 1864.—I. Mr. Yerington.
 - 117. AMERICAN LITERATURE. 3. From 1864.—II. Mr. Jewell.
 - 118. Modern Drama in English. 3. Miss Richards.
- [121.] SEVENTEENTH CENTURY LITERATURE. 3. From Donne to Dryden, exclusive of Milton,—I. Mr. Eaton,

- 123. RESTORATION AND AUGUSTAN LITERATURE. 3. From 1660 to the death of Pope,—I. Mr. Bolton,
 - 130. CRITICISM. 3. Critical Masterpieces and Theory.—II. Mr. Carter.
- 133. Folk-lore. 3. With special attention to the Popular Ballads.—II. Mr. Herrington.

136. MILTON. 3.—II. Mr. Eaton.

COURSES FOR GRADUATES

- 204. Anglo-Saxon. 3. Bright's Anglo-Saxon Reader.—I. Mr. Bradford.
 - 205. Anglo-Saxon Poetry. 3. Beowulf.—II. Mr. Bradford.
- 219. MIDDLE ENGLISH. 3. Language and Literature from 1100 to 1500, exclusive of Chaucer. Mr. Bradford.
 - 220. SEMINAR. Research. Mr. Eaton.

GEOLOGY

OFFICE: 308, LYMAN HALL

THOMAS CRAMER HOPKINS, B.S. (DePauw), A.M. (Stanford), Ph.D. (Chicago), Sc.D. (Colgate)

Professor of Geology

Burnett Smith, B.S. in Chem., Ph.D. (Pennsylvania)

Professor of Paleontology

HARRY NELSON EATON, A.B. (Colgate), A.M. (Harvard), Ph.D. (Pittsburgh)

Associate Professor of Geology

LOUIS WILLIAM PLOGER, B.S., M.S. (Syracuse)
Assistant Professor of Geology

SIDNEY P. POOLE, B.S. (Syracuse)
Instructor in Geology

Prerequisites: Two year-courses in Geology, one of which must be Geology 2, except that in Geology 103 and 212, 2 years in Zoölogy may be accepted.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

- 103. PALEONTOLOGY. 3. Classification, distribution, and relationships of the more important groups of fossils. Mr. Smith.
- 104. HISTORICAL GEOLOGY. 3. Geological systems, their fossils, stratigraphy, and distribution. Mr. Smith.
- 106. Physiography of the United States. 3. The physiographic regions of the United States. Mr. Hopkins.

- 107. Geology and Physiography of New York State, 3.—II. A more intensive study of a limited region, than given in Geology 106. Mr. Ploger.
- 108. Economic Geology. 3. Prerequisites: Geology 2 and Chemistry. Mr. Hopkins.
- 109. Metamorphic or Dynamic Geology. 3. Semester course in each. Not given every year. Mr. Eaton.
 - 111. STRUCTURAL GEOLOGY. 3. Mr. Eaton.
- 113. FIELD GEOLOGY, 3.—II. Practice in knowledge and use of instruments in making areal and structural maps. Alternate years with Geology 107. Mr. Ploger.
- 114. Petroleum Geology. 3.—I. Should be followed by 113. Mr. Hopkins.
 - 117. GEOGRAPHY OF CENTRAL AND SOUTH AMERICA. 3.—I. Mr. Poole.
 - 118. Geography of Europe. 3.—I. Mr. Poole.

PRIMARILY FOR GRADUATES

- 210. Special Geology. Special field problems, may or may not include a thesis.
 - 212. Research Paleontology. Prerequisite: Zoölogy. Mr., Smith.

215. SEMINAR.

GERMANIC LANGUAGES AND LITERATURES

OFFICE: ROOM 206, HALL OF LANGUAGES

Franklin James Holzwarth, A.B., A.M., Ph.D. (Syracuse Professor of German

CHARLES JULIUS KULLMER, A.B. (Harvard), Ph.D. (Tübingen)
Professor of German

WILLIAM JOHN GORSE, A.B. (Oberlin), A.M. (Syracuse)

Associate Professor of German

Prerequisite for Graduate Work: At least six semesters of work of college grade or the equivalent.

Candidates for the Master's degree should consult with the department before arranging their course.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. Scientific German. 3. Mr. Kullmer.

107-110. The Modern German Drama. 3. Mr. Gorse.

108-9. Goethe-Schiller. 3. Mr. Holzwarth.

113. THE TEACHING OF GERMAN. 1. Mr. Gorse.

- 114. SEMINAR. 2. Mr. Holzwarth.
- 119. GERMAN LITERATURE FROM ABOUT 1800 TO 1848. 3. Mr. Gorse.
- 120. ADVANCED COMPOSITION AND CONVERSATION, 2. Mr. Holzwarth.

PRIMARILY FOR GRADUATES

- 215. MIDDLE HIGH GERMAN, 2. Mr. Holzwarth.
- 216. OLD HIGH GERMAN. 2. Mr. Holzwarth.
- 217. Gothic. 2. Mr. Holzwarth.

GREEK

OFFICE: ROOM 208, HALL OF LANGUAGES

- WILLIAM R. P. DAVEY, A.B., A.M. (Brown), S.T.B., Ph.D. (Harvard)

 Professor of Greek
- HAROLD LOOMIS CLEASBY, A.B., A.M. (Trinity), A.M., Ph.D. (Harvard)

 Professor of Classical Archaeology

FOR GRADUATES AND UNDERGRADUATES

Courses not requiring any knowledge of the Greek language.

- 109. Greek Literature from Homer to Lucian in the Best English Translations, with Special Emphasis on Philosophy and Drama. 3.—I. Mr. Davey.
 - 110. Greek Epic in English. 3.—II. Mr. Davey.
 - 130. Greek Archeology. 3.—I. Mr. Cleasby.

HISTORY AND POLITICAL SCIENCE

OFFICE: ROOM 306, HALL OF LANGUAGES

- EARL EVELYN SPERRY, Ph.D. (Syracuse), Ph.D. (Columbia)

 Professor of European History and Civic Education
- EDWIN P. TANNER, A.B., A.M., PH.D. (Columbia)

 Professor of American History
- FINLA GOFF CRAWFORD, Ph.D. (Alfred), A.M., Ph.D. (Wisconsin), Professor of Political Science
- Ross W. Collins, A.B., A.M. (Acadia), B.D. (Union Theological Seminary), Ph.D. (Columbia)

 Instructor in History
- WALDO SCHUMACHER, A.B. (Bluffton), A.M. (Ohio State), Ph.D. (Wisconsin)

 Instructor in History
- Hugh L. Keenleyside, A.B. (British Columbia), Ph.D. (Clark)

 Instructor in History

Graduate students who make a major in history and political science are required to have the equivalent of an undergraduate major. The same provision obtains in minor work. A major may be made in one field and a minor in the other.

Graduate students are admitted to certain advanced courses with undergraduates upon the condition that they will complete certain designated additional work.

In this department unusual stress will be laid upon a thesis as evidence of scholastic ability.

FOR ADVANCED UNDERGRADUATES AND GRADUATES HISTORY

- 102. THE MEDIEVAL CHURCH, 3.-I. Mr. Collins.
- 103. The Protestant Revolt. 3—II. Mr. Collins.
- 105. HISTORY OF FRANCE, 2. Mr. Lauber.
- 115. HISTORY OF EUROPEAN CULTURE, 3. Mr. Lauber.
- 121. History of European Culture Since the Renaissance. 3. Mr. Cleasby.
- 122. AMERICAN COLONIAL HISTORY. 2. An intensive study of the discoveries, the transfer of European institutions to the new world, the rise of self-government, the British imperial-system and the causes of the American Revolution. Mr. Tanner.
- 123. RECENT AMERICAN HISTORY. 3. Mr. Tanner. Alternates with History 120.
 - 127. HISTORY OF THE WORLD WAR. 3. Mr. Sperry.

POLITICAL SCIENCE

- 103. Comparative Governments of Europe. 3. Mr. Schumacher.
- 104. International Law. 3.—I. Mr. Schumacher.
- 105. Federal Administration. 3.—I. Mr. Schumacher.
- 106. STATE ADMINISTRATION, 3.—I. Mr. Crawford.
- 107. CONSTITUTIONAL LAW OF THE UNITED STATES. 3.—II. Mr. Crawford.
 - 108. Municipal Government. 3.—I. Mr. Crawford.
 - 109. POLITICAL PARTIES. 3.—II. Mr. Schumacher.
 - 110. HISTORY OF DIPLOMACY. Not given 1924-25.
 - [111.] International Organization. 3.—II.

PRIMARILY FOR GRADUATE STUDENTS

[204.] The Modern Church. 3. The history of the Christian church from the Thirty Years' War to the present time. Mr. Collins.

213. Graduate Seminar. Mr. Sperry and Mr. Tanner.

LATIN

OFFICE: ROOM 211, HALL OF LANGUAGES

Frank Smalley, A.B., A.M., Ph.D. (Syracuse), LL.D. (Colgate and Union University)

Gardner Baker Professor of Latin

Perley Oakland Place, A.B., (Dartmouth and Harvard) A.M. (Dartmouth), Litt. D. (Colgate)

Professor of Latin; Associate Dean of the Graduate School

CURTIS CLARK BUSHNELL, A.B., A.M., PH.D. (Yale) Professor of Classics

HAROLD LOOMIS CLEASBY, A.B., A.M. (Trinity), A.M., PH.D. (Harvard)

Professor of Classical Archaeology and Italian

THOMAS WYATT DICKSON, A.B., A.M. (North Carolina), Ph.D. (Johns Hopkins)

Associate Professor of Latin

Prerequisites: Graduate students must have had at least two years of College Latin, including the equivalent of Latin 103 and 111; they are advised to begin (or continue) the study of Greek, and to take, in the first year, Greek 130 and Latin 130 (Greek and Roman Civilization).

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

- 104. Roman Comedy. 3. Plautus and Terence.—I., Mr. Smalley.
- 105. METHODS OF LATIN. 3.—II. Mr. Smalley.
- [107.] Letters of Cicero. 3. Mr. Place.
- 109. HISTORY OF LATIN LITERATURE, 2. Mr. Bushnell.
- 111. LATIN COMPOSITION. 1. Review of Latin syntax. Mr. Cleasby.
- [113.] Vergil. 3. The Aeneid, Books 7-12 and parts of 1-6. Readings from the *Ecloques* and *Georgics*. Mr. Place.
 - 114. Lucretius. 3.—I. Ovid.—II. Mr. Place.
 - 116. LATIN EPIGRAPHY. I.—I. Mr. Bushnell.
 - 117. LATIN PALEOGRAPHY, I.—II. Mr. Bushnell.
 - [126.] ROMAN ELEGIAC POETS. 2. Mr. Dickson.
 - 128. ROMAN SATIRE. 2. Mr. Dickson.
 - 130. Roman Archaeology. 3.—II. (cf. Greek 30.) Mr. Cleasby.

PRIMARILY FOR GRADUATES

206. TACITUS, Agricola and Germania; selections from the Annals and Histories. Roman society and literature of the Empire. Mr. Place.

212. LATIN COMPOSITION. 1. The writing of narrative Latin. Mr. Place

223. Pro-Seminar. I. Introduction to methods of research. 1923-24; Greek sculpture of the fourth century. Mr. Cleasby.

225. CHRISTIAN LATIN. 1. The Church Fathers. Documents bearing on Church History. Lives of the Saints. Hymns. Mr. Bushnell.

MATHEMATICS

OFFICE: 304, HALL OF LANGUAGES

EDWARD DRAKE ROE, Jr., A.B. (Syracuse and Harvard), A.M. (Harvard), Ph.D. (Erlangen)

John Raymond French Professor of Mathematics;

Director of the Observatory

Warren Gardner Bullard, A.B. (Brown), Ph.D. (Clark)
Professor of Mathematics

FLOYD FISKE DECKER, PH.B., A.M. PH.D. (Syracuse)

Director of School of Extension Teaching, Professor of Mathematics

MARY NARAMORE HARWOOD, A.B., A.M. (Syracuse)
Assistant Professor of Mathematics

ISAAC SQUIRE CARROLL, PH.B. (Wesleyan), A.M. (Columbia)

Instructor in Mathematics

MAY J. SPERRY, PH.B., A.M. (Brown)
Instructor in Mathematics

For graduate work courses 107, 115, 126, 128 to 131 may count on a minor. Courses 108 to 112, 213, 214, 216 to 226 may count on a major. A reading knowledge of French and German mathematical works is essential for graduate study. Courses 112, 213, 214, 216 to 226 are given as occasion warrants. For further description see courses in Liberal Arts.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

130, HISTORY OF MATHEMATICS. 3.—II. Mr. Decker.

131. ANALYTIC GEOMETRY. 3.—I. Mr. Bullard. Prerequisite: Math. 3.

105. DIFFERENTIAL CALCULUS. 3.—I or II. INTEGRAL CALCULUS. 3.—I or II. Mr. Bullard, Mr. Decker and Mrs. Harwood. Prerequisite: 3.

107(a). Theory of Equations, 3.—I(b). Determinants and Algebraic Analysis. 3.—II. Mrs. Harwood. Prerequisite: 1, 2, 3.

- 108. ADVANCED CALCULUS. 3.—I. Mr. Roe. Prerequisite: 105.
- 109. DIFFERENTIAL EQUATIONS. 3—II. Mr. Roe. Prerequisite: 108.
- 110. Analytical Geometry of Two and Three Dimensions. 3.—I. Mr. Roe. Prerequisite: 3.
 - 111. Modern Geometry. 3.—II. Mr. Roe. Prerequisite: 110.
 - 115. TEACHERS COURSE. 2.-I. Mr. Decker. Prerequisite: 3.
- 126. Spherical Trigonometry. *i.*—II. Miss Sperry. Prerequisite: 1, 2 and Solid Geometry.
 - 128. Solid Geometry. 3.—II. Mr. Decker. Prerequisite: 1 and 2.
 - 129. Analytic Mechanics. 3.—I. Mr. Decker. Prerequisite: 105.
- 112. Analytic Mechanics. 3.—I. and II. Mr. Roe. Prerequisite: 105, 108.

PRIMARILY FOR GRADUATES

- 213. Newtonian Potential Function. 3.—I. Mr. Roe. Prerequisite: 108, 112.
- 214. Spherical Harmonics. 3.—II. Mr. Roe. Prerequisite: 107(b) and 114.
- 216(a). Projective Geometry (b). Higher Plane Curves. 3. Mr. Bullard.
- 217. TWISTED CURVES, GENERAL THEORY OF SURFACES. 3. Mr. Bullard.
 - 218. Symmetric Functions. 3. Mr. Roe.
 - 219. ELLIPTIC INTEGRALS AND ELLIPTIC FUNCTIONS. 3.—I.
 - 220. General Theory of Functions of a Complex Variable. 3.—II.
 - 221. Weierstrass' Theory of Functions. 3.
 - 222. Theory of Invariants. 3. Mr. Roe.
 - 223. Theory of Substitutions. 3. Mr. Roe.
 - 224. DIFFERENTIAL GEOMETRY. 3. Mr. Bullard.
 - 225. SEMINAR. 3. Mr. Roe, Mr. Bullard.
 - 226. Quaternions. 3. Mr. Roe.

MINERALOGY

OFFICE: ROOM 312, LYMAN HALL

CHARLES HENRY RICHARDSON, A.B., A.M., Ph.D. (Dartmouth)

Professor of Mineralogy

Louis Wade Currier, B.S. (Massachusetts Institute of Technology), M.A. (Northwestern)

Assistant Professor of Mineralogy Prerequisite for Graduate Work: Students desiring to undertake advanced work in this department should have a working knowledge of chemistry, geology, one year of mathematics in college as a minimum, and mineralogy.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

- 104. CHEMICAL MINERALOGY, 3. Mr. Richardson.
- 105. CRYSTALLOGRAPHY AND OPTICAL MINERALOGY, 3. Mr. Currier.
- 108. Assaying, 3. Mr. Richardson or Mr. Currier.
- 111. ECONOMIC MINERALOGY, 3. Mr. Richardson.

PRIMARILY FOR GRADUATES

- 207. Petrography. 3. Advanced work in the microscopic determination of minerals and rocks. Mr. Currier.
- 210. ADVANCED TOPICS. 3. Special field and laboratory problems. Mr. Richardson, Mr. Currier.

PHILOSOPHY AND PSYCHOLOGY

OFFICE: ROOM 203-A, HALL OF LANGUAGES; 30 STEELE HALL

George Arthur Wilson, Ph.B. (Boston), S.T.B., Ph.D. (Boston)
William Penn Abott Professor of Philosophy

MARK ARTHUR MAY, Ph.B. (Chicago), Ph.D. (Columbia)

Professor of Psychology

RAYMOND FRANK PIPER, A.B. (Wisconsin), S.T.B., Ph.D. (Boston)

Associate Professor of Philosophy

Morris Gnesin, A.B., Ph.D. (Syracuse)

Instructor in Philosophy

Hulsey Cason, A.B. (Mercer), A.M., Ph.D. (Columbia)

Assistant Professor of Psychology

Prerequisite for Graduate Work: A minimum of 18 hours including courses in Logic, General Psychology, Philosophy, and the History of Philosophy.

FOR UNDERGRADUATES AND GRADUATES

- 107. ETHICS. 3.—I. Mr. Wilson.
- 108. PHILOSOPHY OF RELIGION. 3.—II. Mr. Wilson.
- 109. THE CRITICAL PHILOSOPHY OF KANT. 3. Mr. Gnesin.
- 116. PSYCHOLOGICAL TESTS. 3.—I. Mr. May.
- 118. PSYCHOLOGY OF ADVERTISING. 3.—II. Mr. May.

- 122. PSYCHOMETRICS. 3.—I. Mr. May.
- 124. LABORATORY PSYCHOLOGY. 3.—I. Mr. Cason.
- 125. Laboratory Psychology. 3.—II. Mr. Cason. May be taken without 124.

PRIMARILY FOR GRADUATES

- [210.] CURRENT THOUGHT—ENGLISH OR AMERICAN. 3. Mr. Wilson.
- 211. Current Thought—French or German. 3. Alternates with 210. Mr. Wilson.
- [213.] Problems in the Philosophy of Religion. 3. Mr. Wilson. When given, this course replaces 210, 211, or 215.
 - 214. HISTORICAL STUDIES IN PHILOSOPHY. 3. Mr. Piper.
- [215.] Readings from the Classical Ethicists. 3. Mr. Wilson. When given, this course replaces 210, 211, or 213.
 - 220. Problems and Methods of Psychology, 3. Mr. May.

PHYSICS

OFFICE: ROOM 10, STEELE HALL

ROYAL ARTHUR PORTER, B.S., M.S. (Northwestern), Ph.D. (Gottingen)

Professor of Physics

CHARLES LEWIS BRIGHTMAN, PH.B., A.M. (Brown), PH.D. (Clark)
Associate Professor of Physics

Dorus Powers Randall, A.B., A.M. (Western Reserve)

Assistant Professor of Physics

Prerequisites: A thorough course in college Physics including laboratory work, and a working knowledge of calculus

Requirements for the Master's Degree: For the Master's Degree the student should complete, as a minimum, the equivalent of courses 105, 107, 109, and 112. If some of this work has been covered by the student as an undergraduate, he will elect from the other courses to complete the required number of hours.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. Electricity and Magnetism. 3. Two class hours; one laboratory period.

106. Electrical Measurements. 4. Two class periods; two laboratory periods.

107. HEAT. 3.

109. Light. 3.

112. MECHANICS. 3.

113. Precision of Measurements. 2.—I.

PRIMARILY FOR GRADUATES

210. Modern Physical Theories. 3.

211. RESEARCH, I to 3.

216. ADVANCED LABORATORY MEASUREMENTS. 1 or 2.

218. HEAT CONDUCTION. 2.

JOURNAL CLUB. Instructors and advanced students meet weekly for the discussion of articles on important advances in physics.

RHETORIC AND PUBLIC SPEAKING

OFFICE: ADMINISTRATION BUILDING

Hugh Massey Tilroe, A.B. (Northwestern)

Director of the School of Public Speech and Dramatic Art;

Professor of Rhetoric and Public Speaking

SHERMAN L. KENNEDY, A.B. (Syracuse)

Professor of Debating and Public Speaking

Editha Parsons, (Leland Powers), Emerson)

Professor of Elocution

FOR UNDERGRADUATES AND GRADUATES

105. Advanced Public Address. 1. Designed for the senior year. Original orations, Hymns and Bible reading, Platform etiquette. Mr. Tilroe. Prerequisite: Course 4.

106. Oral Debate. 2. Lectures, class-room debates, individual criticisms.—I. Rhetoric of Oratory. Speeches for all occasions. Lectures individual criticisms, and conferences.—II. Mr. Kennedy. Prerequisite: Course 4.

107. ADVANCED DRAMATIC READING. I. Original adaptations from standard literature. Two plays of Shakespeare are studied from the standpoint of dramatic interpretation. Conferences. Open to men and women who have shown ability in course 2. Mr. Tilroe. May be taken two successive years.

108. ADVANCED DEBATE. 2. A few live questions will be studied intensively. Lectures, reports, class-room debates, individual criticisms, and conferences. Hours to suit students and instructor. Mr. Kennedy. Prerequisite: Course 6.

PRIMARILY FOR GRADUATES

210. PROBLEMS IN THE THEORY OF PUBLIC SPEAKING. 3. An intensive study of speech preparation and delivery. Lectures, reports, addresses by members of the class in the classroom, before the School of Public Speech and Dramatic Art, and before off-campus audiences. Criticisms.

220. Graduate Recital. 3. An intensive study of the preparation and presentation of artistic interpretations. Lectures, adaptations, dramatizations, program building, and arrangements from the classics. Each student will receive one hour each week of personal criticism from the professor.

ROMANCE LANGUAGES AND LITERATURES

OFFICE: ROOM 308, HALL OF LANGUAGES

CHARLES WILLIAM CABEEN, B.S. (Wisconsin), Docteur de L'Université (Grenoble)

Professor of Romance Languages

ARTHUR SAYLES PATTERSON, A.B. (Oberlin), Docteur de L'Université (Grenoble)

Professor of Romance Languages

HAROLD LOOMIS CLEASBY, A.B., A.M. (Trinity), A.M. (Harvard), Ph.D. (Harvard)

Professor of Classical Archaeology and Italian

RAY PRESTON BOWEN, A.B. (Harvard), Ph.D. (Cornell)

Associate Professor of Romance Languages

ROBERTO BRENES-MESEN, State Professor of the University of Chile; Correspondent Member of the Spanish Academy Associate Professor of Spanish

Louis Landré, Agregé (Ecole Normale Superieure)
Associate Professor of Romance Languages

Marjorie Campbell Bradford, A.B., A.M., (Syracuse)
Assistant Professor of Romance Languages

Prerequisites for Graduate Study: At least six semesters of work of college grade or the equivalent; preferably, however, eight semesters of which two semesters may be in the second year of a Romance_Language other than the major.

FRENCH

FOR UNDERGRADUATES AND GRADUATES

- 104. GENERAL VIEW OF FRENCH LITERATURE. 3. Mr. Cabeen.
- 107. Sixteenth Century Literature, 31 Mr. Landre.
- 108. Seventeenth Century Literature (Dramatists). 3. Mr. Bowen.
- 109. SEVENTEENTH CENTURY LITERATURE (The great prose writers). 3. Mr. Landre.
 - 112. EIGHTEENTH CENTURY LITERATURE. Mr. Cabeen.
- 115. NINETEENTH CENTURY LITERATURE (Poetry and Drama). 3. Mr. Cabeen.

- 116. NINETEENTH CENTURY LITERATURE (Prose, novels and criticism).
 3. Mr. Bowen.
 - 122. ADVANCED GRAMMAR AND COMPOSITION. 3. Mr. Patterson.
 - 124. SEMINAR. I. Mr. Cabeen.

PRIMARILY FOR GRADUATES

- 221. OLD FRENCH. Mr. Bowen.
- 227. The Relation of Latin to the Romance Languages. 3.—I. Mr. Cleasby.

SPANISH

FOR UNDERGRADUATES AND GRADUATES

- 103. Spanish Classics. 3. Mr. Brenes-Mesèn,
- 104. NINETEENTH CENTURY LITERATURE (The Short Story and the Novel). 3. Mr. Patterson.
- 106. Nineteenth Century Literature (Poetry and Drama). Mrs. Bradford.

PRIMARILY FOR GRADUATES

208. OLD SPANISH. 2. Mr. Brenes-Mesèn.

ITALIAN

103. Dante, La Divina Commedia and La Vita Nuova. \mathfrak{Z} . Mr. Cleasby.

SOCIOLOGY

OFFICE: ROOM 203-A, HALL OF LANGUAGES

WILBUR THEODORE CLEMENS, A.B. (Syracuse)

Professor of Sociology

ALBERT P. VAN DUSEN, A.B. (Rochester), A.M. (Chicago), Ph.D. (Clark)

Associate Professor of Sociology

WILLOUGHBY C. WATERMAN, A.B. (Syracuse), A.M. (Columbia)

Instructor in Sociology

WENDELL F. FARRINGTON, B.A. (Colby), A.M. (Clark)

Instructor in Sociology

ALMUS OLVER, LL.B. (Syracuse)
Instructor in Sociology

Prerequisites: All who desire work of graduate rank in Sociology must have had at least twelve hours of undergraduate work in the department.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

- 102. RACIAL GROUPS AND NATIONALITIES IN U. S. 3. Mr. Van Dusen.
- 103. HISTORY AND METHODS OF MODERN PHILANTHROPY, 3. Mr. Clemens or Waterman.
- 104. The Dependent, Defective and Delinquent Classes. 2. Mr. Olver.
- 105. The Statistical Method as Applied to Social Conditions. 3. —II. Mr. Van Dusen.
 - 106. Social Aspects of Religion. 3. Mr. Van Dusen.
 - 108. Criminology. 2.—I. Mr. Olver.
 - 109. The History of Social Thought. 3.—I. Mr. Van Dusen.
 - 111. THE PROBLEMS OF RURAL LIFE. 3.—II. Mr. Farrington.
 - 112. TRAINING CLASS FOR SOCIAL WORKERS. Mr. Clemens.
 - 114. THE FAMILY. 3. Mr. Waterman.
 - 115. Social Legislation. 2.—II. Mr. Olver.
- 116. Social Aspects of the Public Health Movement. 2.—II. Mr. Olver.
 - 118. URBAN LIFE. 3.—I. Mr. Clemens or Farrington.

PRIMARILY FOR GRADUATES

117. RESEARCH IN SOME SPECIFIC SOCIAL PROBLEM. Mr. Van Dusen.

ZOOLOGY

OFFICE: ROOM 206, LYMAN HALL

CHARLES WESLEY HARGITT, B.Sc. (Moores Hill), Ph.D., D.Sc., (Ohio)
Research Professor of Zoölogy; Director of the Museum

WILLIAM MARTIN SMALLWOOD, A.B. (Syracuse) Ph.D. (Harvard)
Professor of Comparative Anatomy

GEORGE THOMAS HARGITT, A.B. (Syracuse) Ph.D. (Harvard)

Professor of Zoölogy

Vasil Obreshkove, A.B. (Syracuse) Ph.D. (Harvard)
Assistant Professor of Zoölogy

George Carlos Wheeler, A.B. (Rice Institute), D.Sc. (Harvard)
Instructor in Entomology

Students planning to take advanced work in Zoölogy should be well grounded in Chemistry and be able to read the modern foreign languages. Students expecting to major in Zoölogy are required to have the equivalent of an undergraduate major.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

- 102. Historical and Philosophical Biology, 2.—I or II. Mr. C. W. Hargitt.
 - 103. VERTEBRATE NEUROLOGY. 4.—I. Mr. Smallwood.
 - 104. Embriology. 4.—II. Mr. G. T. Hargitt.
 - 105. GENERAL PHYSIOLOGY. 4. Mr. Obreshkove.

PRIMARILY FOR GRADUATES

- 201. Comparative Morphology of Invertebrates.
- 202. Comparative Morphology of Vertebrates.
- 204. PROTOBIOLOGY.
- 203. Comparative Neurology.
- 205. Cytology.
- 206. TAXONOMY.
- 207. Research.
- 208. SEMINAR.

COLLEGE OF FINE ARTS

The College of Fine Arts offers graduate instruction in Music (piano, violin, voice, organ, and composition) Painting, Design, Interior Decoration, and Architecture. Because all graduate work in these courses is strictly individual no specific work can be prescribed.

DEGREES

A. MASTER OF MUSIC-Mus.M.

Candidates for the degree of Master of Music must be graduates of the College of Fine Arts or some institution requiring a like amount of work, and after graduation must have spent at least two years as performers, composers, or teachers; detailed evidence in writing of the extent and nature of this work must be furnished. These candidates must perform before the Faculty of the College of Fine Arts at least three standard concert numbers. If the major is to be in composition, applicants must submit original compositions in the smaller forms, which show evidence of talent and mastery of material.

Of the thirty hours required for the Master's degree not fewer than ten shall be in a major subject, and not less than six in an allied minor subject. The thesis shall receive a credit value of at least four hours. All theses for this degree must be in the hands of the Dean of the College of Fine Arts on or before May 15. Not later than May 25 the candidate must give a complete public recital or present a public program of original compositions. Of these at least one must be in a large form (sonata, suite, overture, cantata, or concerto).

B. MASTER OF ARCHITECTURE—M.AR. MASTER OF PAINTING—M.P.

Candidates for these degrees must be graduates of the College of Fine Arts or some institution requiring a like amount and quality of work, and after graduation must have spent at least two years as painters, designers, or architects: detailed evidence in writing as to the nature and extent of this work must be furnished. At least four paintings, designs or architectural design must be submitted to the College of Fine Arts faculty.

Of the thirty credit hours required for the Master's degree not fewer than ten hours shall be in the major subject and not fewer than six in an allied minor subject. The thesis shall receive a credit value of not

less than four hours. All theses for these degrees shall be in the hands of the Dean of the College of Fine Arts on or before May 15. Not later than May 25 the candidate must exhibit publicly not less than six drawings, paintings, or designs as the result of his major study.

FELLOWSHIPS

Mrs. Edith Hazard Fobes has established in memory of her mother, Mrs. Augusta G. Hazard, a fellowship in Painting which yields an annual income of \$1000. This will be awarded to the most deserving of the year's graduates in Painting, on condition that it will be used in foreign study.

The late Rev. Hiram Gee also established a fellowship in Painting, the annual income of which is \$500. This is awarded to the second best graduate of the year on similar terms to those of the Augusta G. Hazard fellowship.

SCHOLARSHIPS

The University has established five post-graduate scholarships. These are awarded annually upon the basis of merit to members of the graduating class who may desire to pursue their studies in Syracuse University for a year after graduation.

THE COLLEGE OF MEDICINE

Courses in the College of Medicine are open to graduate students in the following departments: Anatomy, Physiology, Pharmacology, Chemistry, Bacteriology, and Pathology.

LYMAN CORNELIUS SMITH COLLEGE OF APPLIED SCIENCE

C. MASTER OF SCIENCE IN ENGINEERING

Candidates for the		Mechanical Engineering		must stoot
Candidates for the degree of Master of Science in				
courses { A.d or They must als	C.3, A.C.4, and ei M.L.3. so elect a sufficie			
Mechanical {E		Engineering or		
requirements for	a first minor. T	The particular co	ourses to be	so elected

will depend upon the previous training of the candidate and must be approved by the heads of the departments concerned. A second minor must be chosen and a satisfactory thesis presented.

THE MARGARET OLIVIA SLOCUM TEACHERS COLLEGE

COURSES IN EDUCATION

Albert S. Hurst, B.A. (Toronto), Ph.D. (Yale)

Dean of Teachers College; Professor of Education

CLARENCE H. THURBER, A.B. (Colgate) Ph.D. (Columbia)

Associate Professor of Educational Administration

ROBERT P. CARROLL, A.B. (Emory and Henry), M.A. (Columbia)

Assistant Professor of Education

GROVER C. MOREHART, A.B. (Ohio State), M.A. (Columbia)

Assistant Professor of Education

C. Helene Willey, A.B. (Oberlin), A.M. (Syracuse)
Instructor in Education

Prerequisites: Students desiring to major in Education for the higher degrees must have taken History of Education, Principles of Education, Educational Psychology, and one other course, constituting a total of 12 hours before entering upon graduate work.

Candidates for the Master's degree in Education must take the following courses as a minimum: Philosophy of Education, 2 hours; Advanced Educational Psychology, 2 hours; Tests and Measurements, 2 hours, or Administration, 2 hours.

FOR UNDERGRADUATES AND GRADUATES

- 108. CHILD PSYCHOLOGY. 2. Mr. Carroll.
- 109. Elementary School Curriculum. 2. Mr. Thurber.
- 110. Extra Curricular Activities of the Secondary School, $\it 2$. Mr. Thurber.
 - 111. Comparative Education. 2. Miss Willey.
 - 112. Secondary Education. 2. Mr. Thurber.
 - 113. DEVELOPMENT OF AMERICAN EDUCATION. 3. Miss Willey.
 - 120. Junior High School. 3. Mr. Thurber.
 - 130. The Supervision of Instruction. 2. Mr. Morehart.
 - 210. PHILOSOPHY OF EDUCATION. 4. Mr. Morehart.

- 211. ADVANCED EDUCATIONAL PSYCHOLOGY, 2. Mr. Carroll.
- 218. HISTORY OF EDUCATION (ADVANCED). 3. Miss Willey.
- 219. SEMINAR. 3. Mr. Hurst, Mr. Carroll, Mr. Morehart, Mr. Thurber, and Miss Willey.
 - 231. EDUCATIONAL ADMINISTRATION AND SUPERVISION. 3. Mr. Thurber.
- 232. Advanced Educational Tests and Measurements. 2. Mr. Thurber,

THE NEW YORK STATE COLLEGE OF FORESTRY

The Act which created The New York State College of Forestry at Syracuse University in 1911 obligates the College to carry on two important and co-ordinate lines of work; first it is to undertake such special research and state-wide investigations in Forestry as will throw light upon and help in the solution of Forest problems which are now confronting the State and the people of New York; second it is the Institution for educational work in Forestry in the State.

GRADUATE WORK IN THE COLLEGE OF FORESTRY

Various courses lead to the degrees of Master of Forestry, Master of City Forestry, Master of Science, Doctor of Philosophy. Information regarding the requirements and prerequisites of courses for these degrees will be found in Circular No. 42 of the New York State College of Forestry. Correspondence with the Graduate Committee is invited.

SILVICULTURE

OFFICE: ROOM 301, FORESTRY COLLEGE

John W. Stephen, A.B., M.S.F. (Michigan)

Professor of Silviculture

REUBEN P. PRITCHARD, B.S. (Dartmouth), M.F. (Yale)

Professor of Silviculture

- *11. EXPERIMENT STATION PROBLEMS. 3.—I. Mr. Stephen.
- *12. REGIONAL STUDIES. 2,—I. Mr. Stephen and Mr. Pritchard.
- **21. Advanced Silvicultural Practice, 2.—II. Mr. Stephen and Mr. Pritchard.

NOTE: Courses designated by a single asterisk (*) are for undergraduates and graduates; courses designated by a double asterisk (**) are primarily for graduates.

WOOD TECHNOLOGY

OFFICE: ROOM 209, FORESTRY COLLEGE

HARRY PHILIP BROWN, B.A., M.A., PH.D. (Cornell)

Professor of Wood Technology

CARL CHESWELL FORSAITH, A.B. (Dartmouth), A.M., Ph.D. (Harvard)

Assistant Professor of Wood Technology

JOHN ELTON LODEWICK, B.S., M.S. (Syracuse)

Instructor in Wood Technology

- *2. Ornamental Wood Plants. 3.—I. Mr. Forsaith.
- *11. ADVANCED HISTORICAL MORPHOLOGY. 3—III. Mr. Forsaith.
- *4. Textile Fibres. 3.—II. Mr. Lodewick.
- *12. The Microtechnique of Wood Tissue. 3. Mr. Lodewick.
- **21. Research in Dendrology and Wood Technology. Elective for graduates. Mr. Forsaith.

FOREST ENGINEERING

OFFICE: ROOM 105, FORESTRY COLLEGE

RICHARD R. FENSKA, B.S. (Beloit), M.F. (Yale)

Professor of Forest Engineering

HAROLD CAHIL BELYEA, B.A., M.A. (Mt. Allison), B.Sc.F. (New Brunswick), M.F. (Yale)

Assistant Professor of Forest Engineering

- *5. Forest Increment. 3. Mr. Belyea.
- *6. Forest Management. 3—II. Mr. Belyea.
- *7. Forest Engineering. 3.—I. Mr. Fenska.
- **21. Advanced Forest Management I and II. Mr. Belyea.

FOREST UTILIZATION

OFFICE: ROOM 114, FORESTRY COLLEGE

Nelson Courtlandt Brown, A.B., M.F. (Yale) Professor of Forest Utilization

HIRAM LEROY HENDERSON, B.S. (Yale)
Assistant Professor of Forest Utilization

RAYMOND JOSLYN HOYLE, B.S. (New York State College of Forestry)

Assistant Professor of Forest Utilization

- *12. Business Methods in the Lumber Industry.—II. Mr. Brown,
- *14. DRY KILN ENGINEERING. 3.—I. Mr. Henderson.
- *3. Wood Preservation. 3.—II. Mr. Henderson.

- **21. Special Problems in Utilization. Mr. Brown, Mr. Henderson and Mr. Hoyle.
 - *11. Lumber Salesmanship. 2.—II. Mr. Hoyle.
 - *13. AMERICAN LUMBER EXPORT TRADE. 2.—I. Mr. Brown.

FOREST BOTANY

OFFICE: ROOM 204, FORESTRY COLLEGE

Leigh H. Pennington, A.B., Ph.D. (Michigan)

Professor of Forest Botany

Don M. Benedict, A.B. (Michigan)

Assistant Professor of Forest Botany

- *11. GENERAL MYCOLOGY. 3.—I. Mr. Benedict.
- *12. ADVANCED FOREST PATHOLOGY. 3.—I and II. Mr. Pennington.
- *13. CULTURE METHODS. 3.—II. Mr. Benedict.
- *14. ADVANCED MYCOLOGY. 3.—I and II. Mr. Pennington.
- **21. RESEACH IN FOREST BOTANY AND PATHOLOGY. Elective for graduates.—I and II. Messrs. Bray and Pennington.

FOREST ENTOMOLOGY

OFFICE: ROOM 309, FORESTRY COLLEGE

MAULSBY W. BLACKMAN, A.B., A.M. (Kansas), Ph.D. (Harvard)

Professor of Forest Entomology

Edwin A. Hartley, B.S. (Oregon Agricultural College), M.S. (Ohio State)

Assistant Professor of Forest Entomology

- *11. Advanced Forest Entomology. 3.—I or II. Mr. Blackman.
- *12. INSECT ANATOMY. Messrs. Blackman and Hartley.
- *13. INSECT TAXONOMY. Mr. Blackman.
- *14. INSECT HISTOLOGY. Mr. Blackman.
- *15. Problems in Forest Entomology, I or II. Messrs. Blackman and Hartley.
 - *16. Seminar. 2. I or II. Mr. Blackman.
 - *17. Insect Ecology. 3. I or II. Mr. Hartley.
- **21. Research Problems in Forest Entomology. I and II. Mr . Blackman.

FOREST ZOOLOGY

OFFICE: ROOM 304, FORESTRY COLLEGE

CHARLES CHRISTOPHER ADAMS, B.S. (Illinois Wesleyan), M.S. (Harvard), Ph.D. (Chicago), Sc.D. (Illinois Wesleyan)

Professor of Forest Zoölogy;

Director of the Roosevelt Wild Life Forest Experiment Station

CHARLES EUGENE JOHNSON, A.B., A.M., Ph.D. (Minnesota)

Professor of Forest Zoölogy

These courses are designed as a training in the scientific principles underlying the relation of animals to forest lands and waters, and national parks, and the application of these principles to the economic and social problems concerned with birds, fish, game, fur-bearing and other forest animals.

- *2. FISH AND GAME. 3—I. Mr. Adams.
- *3. Ecology of Fresh Water Animals. 3. Mr. Adams.
- *4. Ecology of Forest Animals. 3. Mr. Adams.
- *5. Natural History of National Parks and Preserves. 3.—II. Mr. Adams.
 - *6. Grazing and Predatory Control. 3.—I. Mr. Johnson.
- *11. Problems in Forestry Zoölogy. Mr. Adams. Prerequisites: Zoölogy 1 and 2.
- $\ensuremath{\mbox{**21}}.$ Ecological Research in Forest Zoölogy.—I and II. Mr. Adams and Mr. Johnson.

LANDSCAPE ENGINEERING

OFFICE: ROOM 212, FORESTRY COLLEGE

LAURIE DAVIDSON COX, A.B. (Acadia) S.B.L.A. (Harvard)

Professor of Landscape Engineering

Alan Freeman Arnold, (Harvard)
Assistant Professor of Landscape Extension

- *4. Landscape Engineering Construction. 3.—I. and II. Mr. Cox.
- *5. CITY PLANNING. 3.—I. Mr. Cox.
- **21. Landscape Engineering Details. 2.—I. Messrs. Cox and Arnold.
 - **22. Landscape Engineering Design.—I and II.

ARBORICULTURE

- *3. SHADE AND ORNAMENTAL TREES.- II. Mr. Arnold.
- *4. STREET TREE PLANTING. 2.—II. Mr. Cox.

FOREST CHEMISTRY

OFFICE: ROOM 109, FORESTRY COLLEGE

Louis Elsberg Wise, B.A., Ph.D. (Columbia)

Professor of Forest Chemistry

CLARENCE EARL LIBBY, B.S. (University of Maine)

Professor of Pulp and Paper Manufacture

HARRY ELISHA WESTON, B.S. (Syracuse)
Assistant Professor of Pulp and Paper Manufacture

- *11. CHEMISTRY OF CELLULOSE, 2.—I. Mr. Wise.
- **12. CHEMISTRY OF CELLULOSE. 2. Graduate elective.—II. Mr. Wise.
- *13. SEMINAR, I.—I and II. Mr. Wise.
- **21. RESEARCH IN FOREST CHEMISTRY.—I and II, Mr. Wise.

PULP AND PAPER MANUFACTURE

- *1. TECHNOLOGY. 3.—I and II. Mr. Libby.
- *9. PROBLEM 1.—I. Messrs. Wise, Libby and Weston.
- *10. PROBLEM. 3.—II. Messrs. Wise, Libby and Weston.

RECREATIONAL FORESTRY

OFFICE: ROOM 203, FORESTRY COLLEGE

Henry Russell Francis, B.Sc. (Massachusetts Agricultural College)

Professor of Forest Recreation.

- *3. Projects in Recreational Forestry. 3.—I Mr. Francis.
- *4. NATIONAL PARK PRACTICE, 2.—II. Mr. Francis.
- **5. Research Problems in Recreational Forestry. 3.—I. Mr. Francis.

COLLEGE OF BUSINESS ADMINISTRATION

GRADUATE WORK

A student holding the Bachelor of Science degree from this College or an equivalent degree from another college or school of like grade, may become a candidate for the degree of Master of Science in Business by registering in the Graduate School of the University, by completing a minimum of a year of prescribed graduate work and research with an average grade of not less than eighty-five per cent and by submitting an approved thesis embodying the results of his investigation.

ACCOUNTING

OFFICE: ROOM 106, SLOCUM HALL

George Edward Bennett, A.B. (Wisconsin), LL.M. (Hamilton), C.P.A. (New York State)

Professor of Accounting

PHILIP EDWARD BUNKER, B.B.A. (Boston), M.C.S. (Research University)

Assistant Professor of Accounting

THOMAS JULIAN McCormick

Instructor in Accounting

- 103. Cost Accounting, 2. Messrs. Bennett and McCormick.
- 105. Accounting Systems. 2. Mr. Bennett.
- 106. Auditing. 2. Mr. Bennett.
- 107. Accounting Problems. 2. Mr. Bennett.
- 111. SEMINAR IN ACCOUNTING. 2. Messrs. Bennett and Bunker.
- 122. Public Utilities Accounting, 2,—II. Mr. Bennett.

ADVERTISING AND SELLING

OFFICE: ROOM 105, SLOCUM HALL

ARTHUR JUDSON BREWSTER, A.B. (Yale)
Associate Professor of Advertising

Note. 1. Courses numbered from 1 to 99 are strictly undergraduate except that such courses if marked with an asterisk (*) may, with the consent of the student's major professor, be taken for graduate credit.

^{2.} Courses numbered from 100 to 199 are open to seniors and graduates.

Hubert Emerson Bice, A.B., A.M. (Ohio State)

Professor of Commerce

Herbert Hall Palmer, A.B. (Amherst)

Assistant Professor of Business English and Advertising

MARK ARTHUR MAY, A.B. (Maryville) Рн.В. (Chicago)), Рн.D. (Columbia)

Professor of Psychology

*5. SALES MANAGEMENT, 2.—II. Mr. Bice.

*6. Psychology of Advertising and Selling. 3.—II. (See Business Psychology 3.) Mr. May.

BUSINESS MANAGEMENT

OFFICE: ROOM 105, SLOCUM HALL

MAURICE CONDIT CROSS, A.B., A.M., PH.D. (Ohio State Associate Professor of Business Management

WAYNE EDGAR BUTTERBAUGH,* B.S. IN ECON. (Wharton School), M.S. in Business (Syracuse)

Associate Professor of Transportation

HARRY WALKER HEPNER, A.B. (Muhlenberg)
Instructor in Philosophy

Hubert Emerson Bice, A.B., A.M. (Ohio State)

Professor of Commerce

- 102. Business Organization. 3.—I. Mr. Cross.
- 103. Business Management. 3.—II. Mr. Cross.
- 105. Employment and Personnel Management. 3.—II. Mr. Cross.
- 108. Traffic Management, 2.—II. (See Transportation 103.) Mr. Butterbaugh.*
 - 109. Seminar in Business Management. 1. Mr. Cross.
- *12. Industrial Psychology. 3.—I. (See Business Psychology 4.) Mr. Hepner.
- *14. RETAIL STORE MANAGEMENT. 2.—II. (See Commerce 7.) Mr. Bice.
- 116. FIELD WORK IN ORGANIZATION AND MANAGEMENT. 2.—II. Mr. Cross.

^{*} ON LEAVE OF ABSENCE, 1923-24.

BUSINESS MATHEMATICS

OFFICE: ROOM 105, SLOCUM HALL

FRANK NEWTON BRYANT, C.E. (Ohio Northern), M.S. (Washington State College)

Professor of Business Mathematics

F. WILLIAM BORGWARD, B.S., B.PD. (Syracuse)
Instructor in Business Mathematics

107. ACTUARIAL MATHEMATICS. 3—II. Mr. Bryant.

108. STATISTICAL PROBLEMS. 3.—II. Mr. Borgward.

BUSINESS PSYCHOLOGY

OFFICE: ROOM 30, STEELE HALL

MARK ARTHUR MAY, A.B. (Maryville), Ph.B. (Chicago), M.A., Ph.D. (Columbia)

Professor of Psychology

HARRY WALKER HEPNER, A.B. (Muhlenberg)
Instructor in Philosophy

- *3. PSYCHOLOGY OF ADVERTISING AND SELLING. 3.—II. Mr. May.
- *4. Industrial Psychology. 3.—I. Mr. Hepner.
- *5. PSYCHOLOGICAL TESTS. 3.—I. Mr. May.
- *7. Mental Measurements. 3. Statistical methods applied to the collection and interpretation of psychological data.—I. Mr. May.
 - *8. VOCATIONAL PSYCHOLOGY. 3.—II. Mr. Hepner.

COMMERCE

OFFICE: ROOM 105, SLOCUM HALL

Hubert Emerson Bice, A.B., A.M. (Ohio State)

Professor of Commerce

WAYNE EDGAR BUTTERBAUGH,* B.S. IN ECON. (Wharton School), M.S. in Business (Syracuse)

Associate Professor of Transportation

Paul Valentine Horn, B.S. (Maryland), M.S. (Cornell)
Assistant Professor of Commerce

^{*} on leave of absence, 1923-24.

- 2. Marketing of Raw Materials and Agricultural Products. 3. —I or II. Mr. Horn.
- *3, Marketing of Manufactured Products. 3.—I or II. Messrs. Bice and Horn,
 - 104. Foreign Trade (Exporting). 3.—II. Mr. Bice.
 - 105. LATIN AMERICAN TRADE. 2.—I. Mr. Bice.
 - *6. RETAILING. 2.—I. Mr. Bice.
 - *7. RETAIL STORE MANAGEMENT. 2.—II. Mr. Bice.
- 108. Seminar in Marketing and Foreign Trade. 2.—I or II. Mr. Bice.
 - 109. Foreign Trade (Importing). 3.—I. Mr. Butterbaugh.

BUSINESS EDUCATION

OFFICE: ROOM 105, SLOCUM HALL

GEORGE RESALAS TILFORD, B.A. (Kansas State Normal), B.C.S. (New York State University), A.M. (Minnesota)

Professor of Business Education and Secretarial Science

*8. Organization and Administration of Business Education. 3.—I. Mr. Tilford.

ECONOMICS

See courses 104, 106, 107, 109, 103, 115, 116, 123, 206, page 16.

GEOGRAPHY AND GEOLOGY

OFFICES 308, LYMAN HALL

Тномая Cramer Hopkins, B.S. (DePauw), A.M. (Stanford), Рн.D. (Chicago)

Professor of Geology

HARRY NELSON EATON, A.B. (Colgate), A.M. (Harvard), Рн.D. (Pittsburgh)

Associate Professor of Geology

Sidney P. Poole, B.S. (Syracuse)
Instructor in Geology

- *3. Geography and Geology of Latin America. 3. (Liberal Arts, Geol. 6b.)—I. Mr. Poole.
- *4. Geography and Geology of Europe. 3. (Liberal Arts, Geol. 6c.)

 —I. Mr. Eaton.

FINANCE AND INSURANCE

OFFICE: ROOM 106, SLOCUM HALL

T. Coulston Bolton, B.S. in Econ. (Wharton School), A.M. (Pennsylvania)

Professor of Finance and Insurance

L. Funston Clark, B.S. in Econ. (Wharton School)

Instructor in Finance

Stephen Purcell Toadvine, A.B. (Cornell)

Instructor in Finance

- 102. Banking. 3.—I. Mr. Clark.
- 104. Financial Organizations. 3.—II. Mr. Clark.
 - *5. Corporation Finance. 3.—I or II. Messrs. Clark and Toadvine.
- 106. Analysis of Corporate Credit. 3.—II. Mr. Clark.
- 112. Seminar (Finance). 2. Messrs. Bolton, Clark and Toadvine.
- 113. STOCK AND PRODUCE EXCHANGES. 3.—I or II. Mr. Bolton.
- 114. INVESTMENTS. 2.—II. Mr. Toadvine.
- 115. Life Insurance. 3.—I. Mr. Bolton.
- 116. PROPERTY INSURANCE. 3.—II. Mr. Bolton.
- 117. SEMINAR (Insurance). Mr. Bolton.

HISTORY

OFFICE: ROOM 306, HALL OF LANGUAGES

EARL EVELYN SPERRY, Ph.D. (Syracuse), Ph.D. (Columbia)
Professor of European History and Civic Education

EDWIN PLATT TANNER, A.B., A.M., Ph.D. (Columbia)

Professor of American History

Hugh L. Keenleyside, A.B. (British Columbia), Ph.D. (Clark)
Instructor in History

EUROPEAN HISTORY

- *6. RECENT WORLD HISTORY 1815-1919. 3. Mr. Keenleyside.
- 27. HISTORY OF THE WORLD WAR. 3. Mr. Sperry.

AMERICAN HISTORY

- *8. GENERAL HISTORY. 3. Mr. Tanner.
- 23. RECENT AMERICAN HISTORY. 3. Mr. Tanner.
- *29. LATIN AMERICA. 2. Mr.

OFFICE MANAGEMENT AND SECRETARIAL SCIENCE

OFFICE: ROOM 105, SLOCUM HALL

GEORGES RESALAS TILFORD, B.A. (Kansas State Normal), B.C.S. (New York State University), A.M. (Minnesota)

Professor of Business Education and Secretarial Science

*1. OFFICE ORGANIZATION AND MANAGEMENT. 3.—I or II. Mr. Tilford.

*11. OFFICE ORGANIZATION AND PRACTICE. 3.—I or II. Mr. Tilford.

POLITICAL SCIENCE

See page 20. Courses 103, 104, 105, 106, 107, 108, 109.

SOCIOLOGY

See page 26. Courses 103, 105, 111, 115.

TRANSPORTATION

OFFICE: ROOM 105-A, SLOCUM HALL

CHARLES LEE RAPER, A.B. (Trinity), Ph.D. (Columbia)

Dean of the College of Business Administration;

Franklin Professor of Transportation

WAYNE EDGAR BUTTERBAUGH,* B.S. IN ECON. (Wharton School), M.S. in Business (Syracuse)

Associate Professor of Transportation

JOHN C. DUVALL, B.S. in Business (Syracuse)
Instructor in Transportation

- *1. RAILROAD TRANSPORTATION. 3.—II. Messrs. Raper, Butterbaugh,* and Duvall.
- *2. Water Transportation, 3.—I. Messrs. Butterbaugh and Duvall. 103. Traffic Management, 3.—II. Messrs. Butterbaugh and Duvall.
 - *4. Motor Transportation. 3.—I. Mr. Raper.
- 105. RATES AND RATE MAKING. 2.—II. Messrs. Butterbaugh* and Duvall.

106. Terminal Transportation. 3.—I. Messrs. Butterbaugh* and Duvall.

^{*} ON LEAVE OF ABSENCE, 1923-24.

- 107. Public Utilities. 3.—I. Messrs. Butterbaugh and Duvail.
- 108. ADVANCED PROBLEMS IN TRANSPORTATION. 2. Seminar course. Research, reports, and thesis.—II. Messrs. Raper, Butterbaugh, and Duvall.
- 109. ELECTRIC RAILWAY TRANSPORTATION. 3.—II. Messrs. Butterbaugh and Duvall.
- 112. Foreign Trade (Exporting). 3.—II. (See Commerce 104.) Mr. Bice.
- 113. Foreign Trade (Importing). 3.—I. (See Commerce 109.) Messrs. Butterbaugh and Duvall.





SYRACUSE UNIVERSITY

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